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Upon entry of the instant amendment, claims 1-12 are pending. The Applicant notes that prosecution has been re-opened in this case. Claim 1 has been amended to more particularly point out the Applicant's invention. It is respectfully submitted that the application is in condition for allowance.

CLAIM REJECTIONS - 35 U.S.C. 103(a)

Claims 1-4 and 6-12 have been rejected under 35 USC § 103 (a) as being unpatentable over Koh et al US Patent No. 5,878,053 ("the Koh et al patent") and a trade journal article entitled : 'Fabrication and Characterization of Freely Positionable Silicon-on Sapphire Photoconductive Probes", by T. Pfeifer et al., J. Opt. Soc. Am. B., Vol. 11, No. 12, December 1994, pages 2547-2552 ("the Pfeifer et al reference"). In order to establish a *prima facie* case of obviousness, three criteria must be met as set forth in accordance with MPEP § 2143.

"First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination reasonable expectation of success must both be found in the prior art, not in the Applicant's disclosure."

It is respectfully submitted that the claims recite elements not suggested by either reference. As such, it is respectfully submitted that the Examiner has failed to set forth a *prima facie* case of obviousness. More particularly, MPEP § 2143 requires, *inter alia*, that the reference : when combined disclose or suggest all of the claim limitations. The claims recite an iterative process of initially fabricating a physical device, measuring the physical characteristics of the physical device; and establishing a physical analytical model of the semiconductor. Such a physical analytical model enables performance of the device to be predicted based upon physical characteristics of the device. Neither the Koh et al patent nor the Pfeifer et al reference disclose or suggest a method for developing a physical analytical model. In particular, the Koh et al patent relates to an analytical model that is based upon electrical characteristics of a semiconductor device. The Pfeifer et al reference relates to a

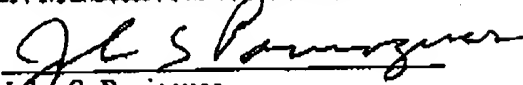
method of measuring the performance of photoconductive probes utilizing S-parameter measurements. As such, it is respectfully submitted that the Examiner has failed to make out a *prima facie* case of obviousness. As such, the Examiner is respectfully requested to reconsider and withdraw this rejection.

Claim 5 have been rejected under 35 USC § 103 (a) as being unpatentable over the Koh et al patent and the Pfeifer et al reference and further in view of another trade journal article entitled: "Mechanical Stress Induced Punch- Through and Process Optimization for Deep Submicron TEOS-O<sub>3</sub> Filled STI Device", by Ishamaru et al, 1997 Symposium on VLSI Technology Digest of Technical Papers, Pages 123-4 ("the Ishamaru et al reference"). Claim 5 is dependent upon claim 1. The Koh et al patent and Pfeifer et al references are discussed above. The Office Action indicates that the Ishamaru et al reference was cited for disclosing mechanical stress simulation of a MOSFET. The Applicant respectfully submits the Ishamaru et al reference does not really relate to an analytical model of a semiconductor device but rather a solution to a mechanical stress problem. For these reasons and the reasons above, the Examiner is respectfully requested to reconsider and withdraw this rejection.

Respectfully submitted,

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